

What is claimed is:

1. A seat occupant identifying apparatus for a vehicle comprising:

5 a load sensor responsive to a physical load acting on a seat of a vehicle which arises from occupancy of the seat by a passenger to provide an output indicative thereof;

a seat occupant identifying circuit working to identify the passenger on the seat based on comparison of the output of said  
10 load sensor with a passenger identifying threshold value;

an aging-caused drift estimating circuit working to estimate an aging-caused drift of an actual output of said load sensor when the seat is unoccupied which arises from aging of said load sensor; and

15 a threshold correcting circuit working to correct the passenger identifying threshold value based on the aging-caused drift estimated by said aging-caused drift estimating circuit.

2. A seat occupant identifying apparatus as set forth in claim 1,  
20 wherein said aging-caused drift estimating circuit is designed to perform a sampling function of sampling an output of said load sensor in a given sampling cycle, a seat unoccupancy determining function of determining whether the seat is unoccupied or not every sampling cycle, an averaging function of averaging the outputs of  
25 said load sensor sampled by the sampling function when it is determined by the seat unoccupancy determining function that the

seat is unoccupied to produce an average value, and an aging-caused drift estimating function of estimating the aging-caused drift based on the average value.

5     3.     A seat occupant identifying apparatus as set forth in claim 2, wherein said aging-caused drift estimating circuit is implemented by a microcomputer which is actuated every sampling cycle regardless of a position of an ignition switch of the vehicle.

10    4.     A seat occupant identifying apparatus as set forth in claim 1, wherein said threshold correcting circuit corrects the passenger identifying threshold value using a correction value which is provided by the aging-caused drift estimated by said aging-caused drift estimating circuit, and wherein the correction value is limited to  
15    within a range between an upper and a lower limit of the aging-caused drift.

5.     A seat occupant identifying apparatus as set forth in claim 2, wherein the seat unoccupancy determining function determines  
20    that the seat is being unoccupied when at least one of conditions are encountered in which an ignition key of the vehicle is in an off-state and in which a seat belt for the seat is unfastened.

6.     A seat occupant identifying apparatus as set forth in claim 2,  
25    wherein the averaging function is implemented by a digital low pass filter.

7. A seat occupant identifying apparatus as set forth in claim 6, wherein a time constant used in the digital low pass filter is selected from a range of several months to several years.

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8. A seat occupant identifying apparatus as set forth in claim 7, wherein the time constant is changed continuously or stepwise as a function of an elapsed time since the passenger identifying threshold value is preset by a manufacturer of the seat occupant identifying

10 apparatus.